SUBTERRANEA BRITANNICA

SECRETARY'S NEWSLETTER NO 17
1996

WELCOME TO,

C. Robert S. Dey,	Perthshire	P. Gwinnell,	Berks
N.A, Lane,	Gloucester	Paul Hewitt,	Surrey
P.Turier,	Gloucester	Dawn Abigail,	Birmingham
Ward Westwater,	Glasgow	Mike Moore,	Shropshire
M. Christidis,	Surrey	Valerie Bannister,	Essex
A. Theophanous,	Surrey	C. Phillips,	Surrey
		Philip G. Boys	Middlesex

Obituary

ELEANOR CLARK, or Lena as she was known to us died aged 83 years on 9th August. Her health had declined during the last two years of her life with osteoporisis, a stomach ulcer which culminated in a serious operation just after Christmas this year then finally she succumbed to pneumonia.

Lena always used to laugh and say that a missed appointment going to the dentist led to her becoming Sub. Brit's treasurer for a number of years. Lena had recently retired from being a teacher at our local school, of which I was a Governor, when we met on a narrow pathway in Royston. After customary greetings she went on to say how cross she was with herself for going to the dentist on the wrong day. One thing led to another, then I told her we were looking for a Treasurer - to which she said she would think about taking it on. The rest is history as you might say. Most will remember that she was a regular member of our Conferences until the onset of her back trouble meant she had difficulty sitting in lectures.

Lena taught infants and juniors and was at one time Headteacher or only teacher of a small village school at Pampisford, Cambridgeshire before moving on to larger urban establishments. She was a keen organist and played at many services for several churches in the area of Royston, a good friend, a lover of birds and the countryside that she never left behind after moving from her rural birth place in Lincolnshire.

She is survived by one remaining brother, nieces and nephews.

Sylvia P. Beamon

The Caves at Covesea

I know no corner of the world where the face of the earth has undergone so many remarkable changes within historic times as along the shores of the Moray Firth, between the mouths of the river Nairn and the Spey (the Covesea Caves of which I spoke, lie just half-way between these rivers). Probably the strangest of all, are those which successively transformed the beautiful Loch of Spynie from an arm of the sea into a great fresh-water lake, and finally into rich pastures and cornfields; and all these changes have occurred since the Bishops of Moray built their stately palace overlooking the fisher's village - a palace which for centuries has been left desolate, overlooking a half-drained inland loch.

And on the other side, extending west-ward towards Findhorn, it is said that where the bright sands now lie crisp and firm, there were formerly wide reaches of alluvial mud, rich in oysters; and it is certain that along the now treeless expanse towards Burghead, there stretched a great forest which supplied the Danes with timber for their shipbuilding, when, early in the eleventh century they occupied Burghead. At that time an inlet of the sea extended some distance inland, and it is said that the name of Hell's Hole (by which one of the finest caves is known), is really a corruption of Helis Hale which described 'the head of the harbour.' The harbour now lies considerably to the west, at the little fishing town of Hopeman, which now rejoices in its newly acquired boon of a branch railway connecting it with Burghead and Elgin.

The cave with this uncanny name lies at the westernmost extremity of wave-worn cliffs which extend thence for three miles along the coast. Strange to say, this fine mass of sandstone crops up quite suddenly in the midst of a wide stretch of white and level sands. Just below the little village of Covesea (or the Coissey as it is called in old records), the cliffs and sea-weed covered rocks end abruptly, or rather, the cliffs leave the shore and form a great horseshoe enclosing a wilderness of bent-covered sand hills, a paradise for rabbits, curving round a beautiful bay of fine white sands which form a most delightful shore for young bathers. Many a gleesome hour did we spend there in happy days long, long ago, rejoicing in the brine-laden breezes. With childish awe we looked to the beacon which at high tide seems to rise from the waters off the further end of the bay and which marks the treacherous Black Skerries, so dangerous to shipping until a tall lighthouse was erected on a solitary cliff rising from the sand hills just opposite the Skerries, and now its ruby and diamond flashes gleam far over the Firth to warn seamen against venturing too near.

But our never-ending pleasure centred in the Caves. Some are always accessible in every stage of the tide, others can only be reached when the receding waters suffer

us to pass certain headlands, and to be hemmed in by the tide at certain points involves a good many hours' detention, though, happily, no risk of drowning. Indeed, in most of the little bays a tolerably expert scrambler can contrive to gain the summit by carefully following natural fissures, several of which have now been artificially improved so as to afford secure foothold. One of these is known as '' the lummie '' or chimney, suggesting a very steep and narrow way - which, indeed, it is an almost corkscrew stair.

Many a time have I scrambled up and down it, but it was not till very recently that I had to prove its true value in the hour of need. Of course, in order to enjoy a leisurely walk, especially if time is to be allowed for sketching, it is wise to secure an outgoing tide and so avoid the risk of unpleasant adventures.

Only last summer, I myself narrowly escaped being held prisoner by neglecting this precaution, or rather, by rashly assuming, from the appearance of the seaweed-covered rocks, that the tide was receding. So, nothing doubting, I made my way to perhaps the only bay from which at high water there is positively no means of escape, and climbing a sandy hillock, entered a cave known as the 'Sculpture Cave',by reason of certain rude carvings on its rocky walls, and was soon deeply engrossed in securing drawings of these. My sketching materials being somewhat bulky, I was happily escorted by a trusty helper, David Grant, who, after duly inspecting the interior of the cave, chanced to look out and exclaimed in dismay, 'The tide is coming in fast.' It was too true; and though we were in no danger, I knew what anxiety would be caused should we not return for so many hours. Without a moment's delay, after hastily packing the sketches, we ran along the sandy bay to the projecting crag which closed it in on the side nearest Covesea.

That crag has been hollowed by the ceaseless action of the waves, and forms one of the finest caves, with three great arches, two of which face the sea. We entered by the third, hoping to be able to pass out by one of the others, but though we quickly took off our boots and stockings, hoping to be able to wade, we were too late - already the water was far too deep. I thought we were effectually trapped, when to our joy, my companion observed a fourth, very low opening on the further side, which neither he nor I ever remembered having noticed before, but which we now know as Davie's passage. By stooping very low, we found we could just make our way along the little passage, and were soon safe beyond that crag. But we had still a considerable distance to scramble over the slippery rocks, sometimes above our knees in water, ere reaching 'the lummie ' and right thankfully we climbed that steep rock-stair, and found ourselves safe on the summit where we could rest awhile on banks of heather and crowberry. Thence, an hour later, I watched great crested waves breaking on the shore, while the rocks along which we made our way were more than six feet under water. Defying a most fatiguing breeze, I took up a good position on the top of the crag within which we had so recently endured such anxious moments, and there secured a picture of the cliff within which is the Sculpture Cave, with its singularly square entrance. Beyond it, a further stretch of crag ends in a detached mass of rock, which, in our young days, was always called the Tailor's Castle. Still further lie the headlands of Hopeman and Burghead, whence many a day I have watched the fleet of herring boats starting for their night of hard toil. Far in the distance Ben Wyvis rises blue above the two Sutors, which form the entrance to Cromarty Bay. Concerning these there is a legend to the effect that in days of old a sutor or cobbler sat on each headland, and as they had only one awl between them, they skilfully threw it backwards and forwards across the Firth.

Very charming is the walk all along the top of the cliffs, peering down into their dark recesses, or watching the endless changes of light and colour on the wide ocean, while now and again resting on the brow of some specially attractive crag. These, in springtime, are rosy with delicate sea-pinks nestling among grey lichens, and in autumn they glow with tufts of rich purple heather, contrasting with the vivid green of the luxuriant crowberry, with its little, hard, glossy, blackberries, the search for which wiles away many a lonely hour for the laddies who herd the too venturesome sheep.

Descending the steep cart-road from Covesea village to the caves, the first point of interest is the Dripping Well, where the villagers leave their cans standing to collect he clear sparkling water which drips, drop by drop, from an overhanging rock. A well just above the bathing bay yields their regular supply, entailing many a weary travel up that steep, grassy hill. Never was there greater need to obey the good old counsel ''Set a stout heart to a stey brae,'' words of wisdom which come to our aid at many a stiff turn of life.

The dripping well which supplies such excellent drinking water, is a good deal further from the village, but people in those, parts do not expect to find everything ready to their hand, and the luxury of obtaining hot and cold water in abundance with no further trouble than turning a tap, would seem to them like a fairy tale. That steep cart-road over the well-worn rock, is suggestive of many a toilsome journey, for by it the loads of heavy, wet sea weed, cast up by the waves, are brought from the shore to manure the fields above. Following its track, we enter a fine large cave which, in common with several others, affords such secure shelter from wind and storm, that it is a favourite camp for certain tinkers - a quiet inoffensive tribe - who from time immemorial have frequented these shores, coming and going as fancy dictates, and selecting their cave for the time being, facing east or west, with due regard to the prevailing wind. Their favourite haunt, however, is the fine cave (a marvel of vividly orange colouring), to which I have already alluded is 'Hell's Hole,' and which to these wandering folk, has all the charm of a loved home an attraction which the most comfortable house made with hands, fails to exert. Their earliest associations are with their cave dwelling, and in sickness and in death they yearn to be brought back here.

Very pathetic was this craving as exemplified a few years ago, when the aged mother of the tribe was so very ill that she had submitted to be taken to the excellent county hospital for treatment. There she received such care and comfort as in all her life she could never have

dreamt of, but she pined, and was so miserable, that at last, yielding to her entreaties, her people brought a cart with straw, and therein carried her to her beloved cave, that she might die in peace within sound of the waves

Some of the far-receding caves are haunted by solemn, black cormorants - scarts the country-folk call them - which dart out with angry cries, as if resenting our intrusion; and blue rock-pigeons also find here a congenial home. (It is strange how creatures adapt themselves to circumstances. Among the Culbyn sand-hills, where no crags and caves are available, these rock-pigeons occasionally startle the ferreters, by darting out from rabbit-burrows in which they have made their nest!)

Among the charms of many of these caves are the numerous water-worn openings which tempt one to much scrambling in order to peep out at the sea from new angles, and to catch new glimpses of richly coloured crag. Passing through the first cave of which I spoke and out by another entrance, we find ourselves at the foot of a great solitary rock-mass, in form something like a gigantic body on two thick legs. This is generally called the Gull's Castle, and a somewhat similar mass further on is known as the Tailor's Castle; each has evidently once formed part of a great cave which has fallen in, and its fragments have been dispersed by the waves or buried beneath the sand.

Overlooking the Tailor's Castle, and well raised above the sea, is the Saint's Cave, supposed to have been the chosen cell of an anchorite of old. A rudely squared stone receives the water which slowly drips from the roof, and may have supplied the lonely man with drink or with water wherewith to baptize his converts. Many a peaceful hour have I there spent watching the slow and silent influx of the tide, as it quietly stole onwards over weedy rock and gleaming sand, till it bathed the base of the tall 'Castle' and the pile of fallen rock and shingle below the cave.

Behind the Gull's Castle grassy hillocks nestle round the base of an amphitheatre of rock, and, well concealed by these, a low, artificially squared entrance marks a small cave, known as Sir Robert's Stable, a well-founded tradition being that here, in the days of Jacobite troubles, Sir Robert Gordon was in the habit of concealing his best horses so that when 'the Rebels' came to Gordonstoun to requisition his steeds, they found only common cart-horses.

The Stable Cave is now only a dark, damp place, very different from most of the neighbouring breezy caves, daily washed by the green waves, but it was then probably in better order. According to tradition, there was in those days an underground passage thence, all the way to Gordonstoun House - a full mile - but if such ever existed, all trace of it has long since disappeared.

It was not for live stock only that the caves afforded a secure hiding-place. In those days when smuggling was so much in fashion, the facilities offered by such a shore as this were not likely to be overlooked. Consequently, even among old family documents of some of the neighbouring gentry, letters have been found proving very plainly how many lovers of good wine, brandy, and tobacco profited by all chances of landing their share of cargoes which had contrived to elude the obnoxious excise duties. Doubtless, such illicit stores may, in some cases, have had to lie hidden for considerable period ere a safe opportunity arose for transporting them to their destination; and, in some cases, it may have been necessary to trust largely to the honour of the country-folk, who might very well have discovered and appropriated the hid treasure.

Hence, in the interior of the aforesaid Sculpture Cave, which stands well above the high-water mark, thus forming a very secure storehouse, there is inscribed on the rock, in large well-cut letters, this ban:

CURSED BE THEY Yt PLINDER

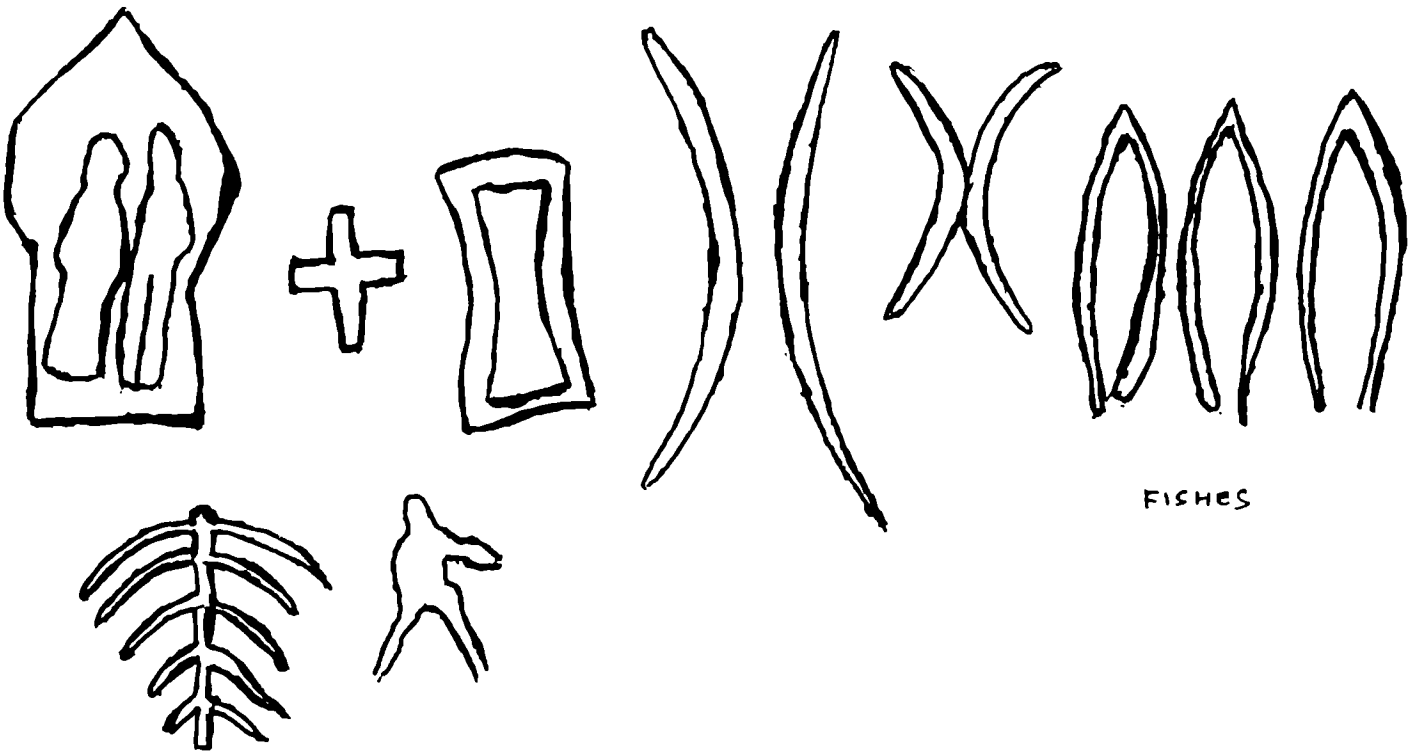
with the initials the date Mar. 1655 or 1677, and a peculiar ornamental scroll. Further in the interior the same date and scroll are repeated with the well-cut name Horn. Curiously enough, I find that in 1672 James Horne was Minister of Elgin. Was it he who here reminded his outlying flock of the sin of theft, and had he any personal interest in the safety of hidden treasure ?

That cave (which is entered by a double mouth, seeming as though it must have been artificially squared) has been a favourite haunt of many successive generations, and is the only one on which they have left there rude designs. Unfortunately, the rock is of so friable a character that it crumbles at a touch, and the marvel is that any of its very primitive sculptures should still be discernible, more especially as with lamentably bad taste many visitors have proved their own hopeless vulgarity by deeply cutting their own, or their friends' name or initials, generally in letters so large that it now requires careful observation to trace out the fainter carvings so interesting to the archaeologist. I took the trouble last summer to note the most offensively conspicuous of these names with the intention of publishing them for public indignation, but, fortunately for the culprits, a sudden gust of wind carried away my paper while I was subsequently sketching from the summit of the crags.

Of the inscriptions one bears date 1370, but the designs are undoubtedly pre-historic. Such are the fish fourteen inches long and the curious symbol which, for want of a better name, is, I believe, known to antiquarians as 'the spectacles.' Another is 'the looking glass,' which figures in so many stories of divination in the old folk-lore. Others seem to be simply the rude symbols of three fishes, double crescents, and curiously blended double triangles; also crosses and an hour-glass, all of which have their counterpart among the rude sculptures in the caves of Fifeshire. One, however, is, I believe, peculiar to this cave, namely two figures within a shrine the whole fifteen inches high.

Strange, indeed, are these traces, faint but unmistakable, of the handiwork of those long-forgotten people. Yet lingering survivals from heathen times are scarcely yet wholly extinct among us, and the neighbouring fishing towns of Hoperman and Burghead have, happily, retained some picturesque customs directly linking this prosaic nineteenth century with those ancient days when fire-worship and well-worship here prevailed...

C.F. Gordon-Cumming. From Good Words 1897. Isbister and Company, London



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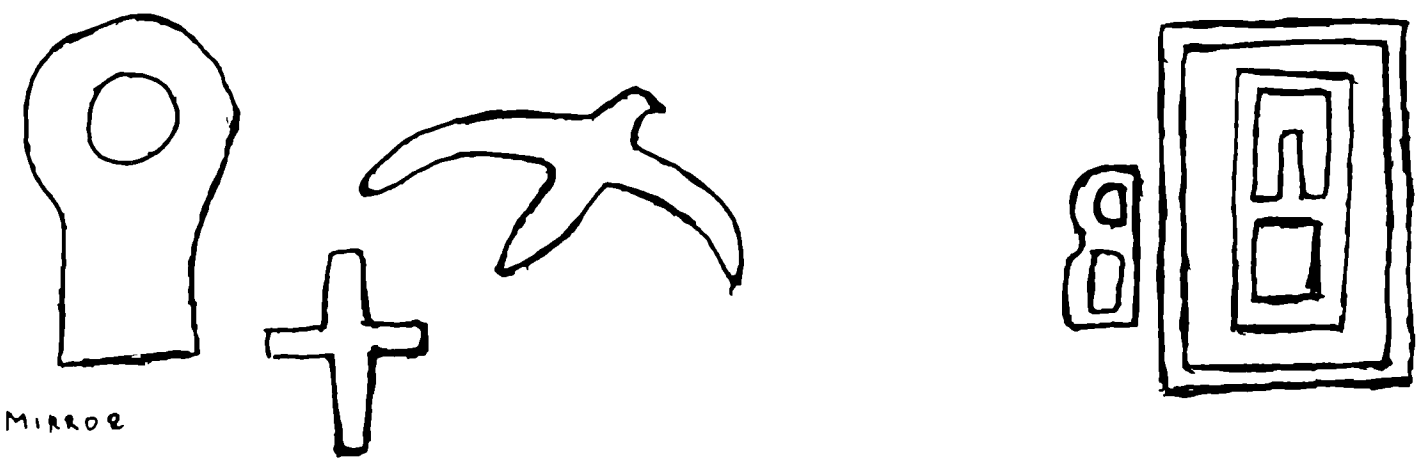

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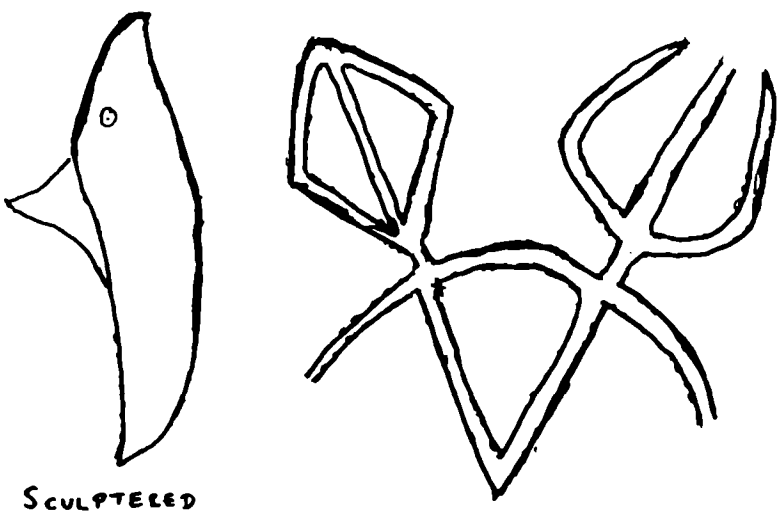

SCULPTERED FISH

SCULPURED SPECTACLE ORNAMENT

Book Review

Caves and tunnels in South East England. Part 11. Records Chelsea Speleological Society 22: ii + 60pp. £4 including p/p from the author at 58 Prospect Place, Wapping Wall, LONDON E1 9TJ.

The comprehensive documentation of all cavities, whether artificial or natural, in the home counties and those adjoining them, was commenced in the 1950s by the sometime London Speleological Group. The LSG issued two slim volumes of Records, edited by G.A. Peet, in 1956 and 1958. From volume 3 (1963) the series has been published as the Records of Chelsea Speleological Society.

Unusually, however, for a caving club the CSS's main publication (there is also a Newsletter) has been almost exclusively concerned with man-made cavities. The cavities in this continuing series have included all kinds of sites from prehistoric flint mines; medieval, post-medieval, and modern chalk, fullers' earth and sand mines, and underground building-stone quarries; canal, road, and railway tunnels; military and cold-war structures; and miscellaneous tunnels and a few natural caves (man-used or otherwise.)

Only an occasional issue has been devoted exclusively to natural limestone solution caves volume 19, 1992 , for example,deals with such caves at Llangattwg in South Wales. Harry Pearman has been more than actively involved in the writing, compilation, or editing of the CSS volumes from their inception.

The earliest volumes in the CSS series were 'Secret Tunnels in Surrey' (1963), 'More secret tunnels in Surrey' (1968), and 'Caves and tunnels in Kent' (1973.) By 1976, however, so much miscellaneous information was being collected for all the south-eastern and adjoining counties that the single-county volume was abandoned in favour of a continuing series on the 'Caves and Tunnels of South East England', which has now reached 11 parts. The contents of all these volumes have been collected in a variety of ways. The compiler has visited, surveyed, and described a large number of sites. His informal 'team' of correspondents have done likewise. They have also collected local information orally, and have combed older and current published sources of all kinds relating to underground cavities and structures. Everything from measured plans and sections to the vaguest of oral rumours has been collected. Eighteenth-century snippets in the Gentleman's Magazine, nineteenth-century field club excursion reports, twentieth-century newscuttings have all been collated, indexed, cross-referenced, and systematically filed. For some individual sites, there is now quite a voluminous dossier. Increasingly, there are also copies of letters exchanged with landowners, occupiers, developers, planners, and others interested in ground instability.

The present volume includes information on flint-mines in Norfolk, Suffolk, Surrey and Sussex; chalk-mines in Berkshire; sand-mines in Surrey; underground building stone quarries in Northamptonshire; an ice-house in Sussex; an extensive underground air-raid shelter and sundry military and 'Cold War' tunnels in Kent; some miscellaneous tunnels; and natural caves in the chalkcliffs in Sussex.

The entries include reports on recent site-visits, reprinted descriptions of late-19th and early 20th-century site visits, information extracted from newspapers and local histories, and the like. Bibliographical references to sources are cited. National grid references, of various degrees of precision, have been given where these could be ascertained reasonably accurately. There are 18 pages of sketch-plans and sections - some the results of survey and others reproduced from earlier published works; a scale and north-point have been included wherever possible.

Additional to the main body of the work, there is a two page section detailing underground bat sites in Kent (with numbers of animals recorded hibernating in 1989,although the actual species seen are not indicated); there are ten pages of 'notes and queries' (soliciting further information on rumoured 'secret tunnels' and the like); a two-page bibliography; a classification scheme for underground sites; and a six-page index. The book is of laser-printed A4 sheets, with a spiral plastic binding that will almost certainly need replacing with something more durable within a few years.

In addition to the three single-county volumes already mentioned, and the eleven parts in the 'Caves and Tunnels in south east England' series, the CSS Records series also includes two editions of a site gazetteer (1983 and 1991), and two 'thematic' volumes on deneholes (almost certainly medieval chalk-mines)(1966 and 1979.) An obvious need is for further volumes of the latter type, collating and interpreting (for example) the mass of information now available on one specific type of industry, such as sand-mining. The series as a whole is clearly an invaluable resource for archaeologists and historians (whether industrial or mainstream) working in any of the counties covered, as much information not otherwise readily available is presented. Comparative studies, for particular classes of structure (perhaps chalk mines, deneholes, and chalkwells) throughout the south-east, are facilitated by this continuing documentation. Naturally, in view of the diversity of the sources used, the value of all of this information should be assessed carefully, and the primary sources located and consulted whenever possible. The compilers have fulfilled (and continue to fulfil) useful tasks in reporting rumoured cavities, reporting on cavities found on inspection to exist, and reporting published references concerning such cavities. This is all valuable groundwork, whether for those whose interest in these things is academic or practical. The series already proved of considerable interest to potential landowners, occupiers or developers and their advisers; and to planning authorities.

Those researching underground mining and quarrying in the south-east will find a complete set of the CSS Records a more informative and very much less expensive investment than Arup Geotechnics' Review of Mining Instability in Great Britain 'Regional Report for South East England' (1991.) Indeed, much of that study was derived from the CSS files and publications!

Paul W. Sowan

Sussex Limestone Mine.

Purbeck Limestone.

The succession of strata have been given in Chap 3; some notes collected by Mr C. GOULD on the mode of working the stone may appropriately be given here. They were obtained from intelligent men who had actually worked in the pits, and are no doubt reliable. *

Limekiln Wood.-The bell pits, where of any depth, require five men to sink them. Two remaining at the windlass, while the others work below. A circular shaft, 4 feet in diameter, is sunk for 20 feet The quarrymen then commence to bell it out, increasing the diameter with the depth, so that eventually the base of a pit, 50 or 55 feet deep, is as much as 20 feet across. No timbering is necessary, unless as is sometimes the case, the quarrymen proceed to drive out horizontal galleries from the base of the pit.

The amount of water in these pits is rarely great, and pumps were seldom erected; but 'pinnocks,' or square timber troughs, 8 inches square, were laid down from one pit to another, and so continued to lower ground.

Estimate of the Cost of the Lime (furnished by a Quarryman at Limekiln Wood)

Payment of royalty to the landowner, per kiln £2 2s
Payment to quarryman for extracting the stone and burning it. £5 10s
Cost of team to carry the stone to the kiln, &c. £1 10s
Cost of wood for fuel; about 2,000 faggots,at 3s. 6d. to 4s. per hundred
The total cost averages about £14
The capacity of the kiln here being about 640 bushels.
£4 to 5 if purchased at the kiln from the lime-burner, instead of the whole kiln having been contracted for:-
6d. per bushel is paid for " Grays." and 7d for "Blues"
Both delivered into Hastings at 2d. per bushel more.

The Blue limestone makes by far the best lime for building purposes, but the Grays are by many considered equal to the Blues for agriculture.

Archer Wood:

The quantity of the Greys at Archer Wood was but small, and in consequence of their laying near the surface they were extracted by bell pits in the ordinary manner. With respect to the Blue limestone, however, the miners proceeded in the following manner.

The general dip of the strata having been ascertained to be towards a point a little west of south, they commenced by sinking a main pumping shaft, upon the north side of the valley formed by the small stream which traverses the wood; and at a depth of about 60 feet two levels were driven out to the right and left respectively, at a slight angle to the strike of the beds. These, which were called the wet levels, constituted the southern boundary of the workings, and served to drain the whole of the excavations subsequently made. Two pumps were mounted in the main shaft, and were driven by the power derived from an overshot wheel.

These necessary preliminaries having been completed, the whole length of the levels was divided into distinct faces of work, by means of galleries driven out at right angles to them, and subsidiary shafts were sunk for the purpose of winding up the stone. A face of work was then gradually carried forward, the miners supporting the roof as they advanced by means of forks or upright timbers with cross props, the limestone being brought to the foot of the shaft along the gallery, while the shale and refuse portion of the stone was thrown back into the " gobbin " behind.

When the distance of the face of work from the last level had reached the limits beyond which the stone could not be drawn with economy, in consequence of the increased expenditure attendant upon the underground carriage, a second face of work was treated in a similar manner, and the operation repeated until the whole had been advanced to equal distances from the main 'wet-level.' Levels were then driven parallel to the first two, a second series of shafts sunk, and the extraction of the stone recommenced in the manner which I have just described.

Eventually a third series was sunk. The dip of the beds was found to increase considerably as the workings stretched northwards, and I feel but little doubt that they were limited by a fault which brings the beds up against the Ashdown Sands that direction. The amount of the interval between the shafts was of course determined by the expense of under-ground carriage. It appears, from my informant's account, to have been from 12 to 14 yards along the main wet-level, and about 20 yards along the galleries; the labour of carrying the stone being diminished in the latter case, by the downward slope of the strata. Occasionally, light waggons were employed underground, when the distances between the shaftswere increased, intervening 'fork headings' being driven.

The shafts varied in depth, according to their position, from 60 to 110 feet; their form was that of a parallellogram, of which the dimensions were 4 feet by 3, inside the timbering. The timber was obtained from the estate, and oak alone was used.

The horizontal timbering consisted of square frameworks about 4 inches by 3 inches, repeated every two feet; these served not only to protect the walls of the shaft, but were also used bv the miners for the purpose of ascent and descent.

The 'backing,' or vertical framework consisted of 'slabs ' or the outside portions of oak timbering closely driven together. A horse whim was erected at the top of each shaft, and 'lacing boards 'or planks laid along it, for the buckets to rub against. Only the first, second, and third limestones were extracted at first, the fourth being left to form a roof when the fifth and sixth were extracted; the height of the galleries in the first case was feet, in the second 4 feet.

I must add with respect to the galleries, that care was always taken to keep one side of them, while in use, protected by firm unbroken ground; the hard refuse, stone, &c. was packed in to form wall upon the other.

Cost of the Lime.-The blue lime was sold for 9d. per bushel, for building purposes, but the price was reduced to 8d. per bushel, if tended to be laid upon the land. It was delivered in Hastings for 1s. per bushel.

A kiln formerly contained 1,000 bushels; and two men could burn three kilns in a week, working two hours each alternately. Three additional men were required to fill and empty them. The capacity of the kiln was afterwards reduced to 600 bushels. The miners usually worked in bodies of three or four.

As in Limekiln Wood, the fuel used appears to have been principally faggots and furze. The latter was occasionally sown for the purpose, and was cut every three years. **

C. GOULD

*These workings have been for years abandoned, and for this reason the estimates of the cost, as here stated, can have but little value now. W. T.

**Furze was the common fuel used in the Weald, when wood was getting too dear and coals were yet hard to get.

From Geology of the Weald. William Topley, HMSO 1875

Chapter XXIV.-Limestones, Manures , Clays, &c.

Strange underground structure at Bristol

The following E-Mail message was received by your secretary.

'The structure is situated in Vyvyan Terrace, Clifton, Bristol. It was found during the course of relaying a sewerage pipe along the line of an existing pipe. The arched stone roof is approximately 3 feet beneath the lawn. The plan form is approx 7 feet wide by 32 feet long with a height to the top of the roof arch of 20 feet. One of the short sides is in the natural bedrock whilst the other is partly obscured by rubble. The walls are of a stone and mortar construction and have a number of apertures 13 inches square by 18 inches deep set just below the start of the arch. However, one of these apertures is much deeper than the others and can be seen to extend for 10 feet or so before it turns a corner. A brick pier of more recent (?) construction is in the centre of chamber to support the old sewer.

There are a number of cellars in the adjacent houses which show a similar construction for the walls.

Should you wish to investigate on site please contact me and I will make an introduction with the house-holder. I hope that this is of interest.

Dave Eyre

Malcolm and Barbara Tadd visited the site with Mike Breakespeare. There was no obvious explanation for the structure. Malcolm wondered if stone was extracted on the surface when the houses were built. The digging could have been filled with waste and any space left unfilled arched over with bricks to level the ground. This would explain why the void we entered had no noticible way in or out except for the break-through from the surface we had entered

Scottish Gold

Work is expected to start in October on the construction of Scotlands first goldmine, a project worth 7.5 million pounds stirling.

The mine, at Cononish, near Tyndrum in Perthshire, will be developed by Inverness-based company Fynegold, a subsidiary of the Canadian Caledonia Mining Corporation, which operates out of Toronto.

Detailed engineering design for the process plant and infrastructure is under way and is expected to be finished by October 1996. Construction contracts, lasting 12 months, will then be placed and up to 80 local jobs will be created on process plant and underground mining work.

Mining is expected to begin around the middle of 1997, with the first gold production scheduled for the third quarter of next year. The mine's life is estimated at between seven and eight years, but Fynegold believes that an exploration programme will uncover further gold, which should increase the life of the mine by several more years.

Sent in by Phil Marshall from , Construction News, 1.8.96

Black death tomb to be opened in Edinburgh

It is claimed that plague victims were entombed and left to die in an underground labyrinth at St. Mary's Close, Edinburgh. The structure together with The Close itself was sealed in 1645 and since then there have been stories of hauntings.

The Close, once a bustling street of shops and taverns, now forms the foundations of the city's council chambers but the council as such has no official plans to open the labyrinth as a tourist attraction. Despite this a private tour company, True North Tours, is to conduct tours on a limited scale following a pilot scheme which attracted 4000 visitors. A year-round attraction is not possible because a substantial financial investment would be necessary to make the system accessible and safe enough for that purpose. In fact 10 years ago the council commissioned an architectural survey

Information from Phil Marshall

Book Review

The Secret Tunnels of South Heighton - A Tribute to HMS Forward, Royal Naval Headquarters, Newhaven . SB Publications, Seaford , BN25 1TP. Available direct from the author Geoffrey Ellis, 11, Fairholme Road, Newhaven, BN9 0 NY £5.99 (+£1 p+p)

A complementary video tape, 'The secret Tunnels of South Heighton, tours the tunnels and includes interviews with ten veterans who returned to see their former ship. Price £9.99 (+1.50 p+p) direct from the author

Geoff Ellis, historian for the Newhaven Historical Society, writes that his book, is now available. It tells the story of the secret compex of tunnels HMS Forward, the vital subterranean Naval Intelligence establishment located at South Heighton during WWII .

After four years extensive research by the author using official archives , and by tracing former service personnel who served here, the full details of

conception, design, construction and operation have been revealed. Three dozen ex-Wrens and Naval veterans recountered their first-hand experiences to produce this authentic account for posterity. The book includes many unpublished wartime secret photographs and the actual texts of many archived secret signals.

Geoff adds: ' The publication of the book is only the first chapter in my greater ambition, which is to see the tunnels declared an Ancient Monument, and opened for guided tours. I have been making noises in high places about achieving this objective,and have gained the attentions of Lewis District Council up to the Chief Executive. and the Leader of the Council.

Andrew Emmerson

Note. See Secretary's Newsletter 16. Ed.

Tourist tunnels for more and more towns.

A desire to exploit systems of tunnels under English towns for touristic purposes appears to be becoming fashionable. Sub.Brit. members are involved with projects in Reigate and Wisbech and have been involved in discussions in other places. Tony Jarrett has now sent a cutting from the Fosse Way Magazine (No105, 1.11.96) which says "...A network of centuries-old tunnels criss-crossing Frome, and possibly extending 10 miles out of town to Bruton, Evercreech and Bradford-on Avon, is being investigated and could soon be opened up as a major new tourist attraction. The staggering engineering feat of driving tunnels through the bedrock of a hilly Somerset town is mind-boggling. The reasons for the tunnels are still shrouded in mystery, though escape routes for persecuted priests and hiding places for smugglers are among the possibilities. They are certainly believed to date back to Reformation times some 300 years ago, and to have created a massive network of secret passages 20 to 30 feet below ground..."

David MacGregor, manager of the Catherine Hill traders association is enlisting a team including, cavers, to find and map out the tunnels. We must wish him luck particularly as the article gives little evidence, other than rumour and speculation, that a complex linked tunnel system actually exists. Nevertheless Mr. MacGregor is hopeful that the town will have an underground system to rival Cheddar and Wookey as a tourist attraction.

Malcolm Tadd

Rowberrow Water Treatment Works, Near Winscombe, North Somerset.

The Bristol Water Company held an open day at Rowberrow Works on Saturday, 21st September 1996. Previous open days have proved popular with the public which encouraged the organiser Jeremy Williams to arrange 'once only' access for visitors, to the associated pipe service tunnel.

The tunnel is about half a mile long, level and straight except for a curve right at the entrance furthest from the Works. It was driven through a hill to take the main water pipe from Blagdon and Cheddar reservoirs, as far as Barrow. Work started during the First World War and was completed during 1922, the entrance arches being engraved 'B.W.W. 1922'. Teams of navvies and prisoners of war carried out the manual hewing through rather shattered Mendip limestone rock, using a little blasting as some shot holes are visible. Most of the bore was left very rough but lining was necessary in a few places where a spring directly above threatened to cause collapse. Concrete and shuttering was used to form an arched roof with vertical walls.

The original 33 inch diameter cast iron- pipe is still in use and was externally renovated about 20 years ago. It is expected to give up to another 50 years service The sections were intended for another tunnel, under the river Avon at Hotwells (near Brunel's Clifton suspension bridge). Enough were left over to also complete the Rowberrow tunnel work. The lettering 'Hotwells 1917' is visible on them. A few spare sections are still stored in case required for repairs. The heavy sections were moved into place in the tunnel using a railway of 2ft nominal gauge and lead joints were then cast in place within the tunnel. Although built as a main feed for Bristol, the pipe has also been used subsequently for local supplies. Rowberrow treatment works was built for this purpose in 1926 but is now extensively modernised.

The tunnel entrances have gates fabricated by rivetting strips, panels and angle sections of wrought iron together. This allows an air flow, and incidentally resulted in a large bat colony using the tunnel as a roost. The gates are hung from stonework giving a distinctive appearance, sure to arouse the curiosity of anyone partial to industrial history. Many people must have glimpsed the entrance beyond an enclosure with spiked iron railings at the foot of a cliff, as they pass on the A38 road. The other entrance gates bear a plate with the number 42 indicating this was the 42nd civil engineering project undertaken by the water company.

It is rumoured that some of the crown jewels were stored in the tunnel for safe keeping in war time, though this is very unlikely to be true. It is known that dismantled fairground rides were stored there in the WWII, having been removed from London. Their destruction in air raids would have been bad for morale.

The railway used to move pipe sections into place has now corroded very badly and would not stand up to any real use, remaining only as a curiosity. The metal sleepers were set into the concrete tunnel floor and many have completely or partly rusted away to leave voids with ragged edges. The fish plates and their bolts are iust flakes of rust which would break away if given any sharp blow.

One of the original construction wagons sits behind the gate at the A38 end, its channel steel frame badly flaked with rust. The frame has rounded ends without any couplings and carries heavy timbers for a central bearing hole. There was probably a swivelling top plate or cradle which is now missing. A long drawbar extends from the centre to one end. It seems likely there was another similar wagon so they worked as bogies. The axle boxes have raised lettering on them "BW&CW LTD 1917 BRISTOL 4 1/2 x 2". The wheels are very robust with T section

spokes and still turn even after such long disuse.

It can sometimes be worth taking your own hard hat and cap lamp to special open events such as this one, even if the organiser provides lighting. Here it was a petrol generator and single bulbs placed at intervals. This only allowed visitors to walk about half-way through. I was only able to walk the remainder and inspect the wagon because of having my own lamp, which made some other visitors feel rather peppery. They had to queue patiently for their turn to go in batches of ten with borrowed hard hats stopping half way. A similar advantage was won at East Lays, where the management positively insisted I would not need my lamp. Of course, the old power house was in pitch blackness so I was very glad to have my own lighting. All the original war time vintage equipment is still in place, layered with dust.

The bats of Rowberrow tunnel can now look forward to being left undisturbed again, as they have been since the tunnel was built because only maintenance or inspection personnel are allowed in. The Health and Safety implications of having the public in make it difficult to secure agreement and insurance cover.

Brian Clarke

Combe Down - An Update
Local radio news, and newspapers late June 1996

There was a brief flurry of reports, following which the media seems to have become bored by the story with renewed silence (as of 17/7). Perhaps they began to detect it was just more of the same, with no outcome in sight.

Whatever arrangements may have been made for massive infilling, works now appear to have failed, possibly victim of local government reorganisation, and/or abandoned following hot local objections to the material proposed (PFA). It depends what 'spin' you put on the reports, but it sounds like good news for the bats! A letter quoted in a newspaper reveals funding for monitoring the mines is available 'for another year without prejudice' and implies previously arranged finance for the scheme favoured by the Halcrow Report is no longer available.

Fears of mine collapse were again trumpeted, with 'urgent government talks' expected reviewing how stabilising works can be paid for. The new Bath & North East Somerset District Council is 'working with Government Agency English Partnerships to seek the 529 million funding.' It is common knowledge that B&NES money is short even for more routine expenditure. The remark that 'a possible mixture of public and private finance is being investigated' should provoke thought, and perhaps a second chance for concerned parties like Sub. Brit. to lobby for less destructive options. One cannot help wondering just what interest 'private money' could have in such infilling works other than the disposal of controversial materials on an 'out of sight, out mind basis.'

Former Tory councillor Leila Wishart, who lives on Combe Down, announced a new petition urging the Government to find the money (presumably for the original Halcrow scheme?). This would be presented to Rob Mimmack at B&NES, which was reportedly 'seeking a meeting with Environment Minister David Curry.' Meanwhile, B&NES was to consider 'hiring consultants to evaluate costs of shoring up the mines' Reading between the lines, all this look like boiling down to the old tactic of stalling off the problem (ie the expense!) and hoping it will just go away. I even wonder now if a few houses well and truly 'falling in' would actually make any difference, or not.

On a less serious note, a locally based company intending to promote a public transport network with new and improved "Park Ride" facilities has mentioned the Combe Down Mines. The void is regarded as a possible future underground car park, with an access lift shaft driven down to the disused Somerset & Dorset Railway tunnel beneath.....

Brian Clarke

Note. Regular readers of this journal will have followed the Combe Down story over several years. Originally Sub. Brit. protested at the proposed infilling of this historically important site.

We were probably the first to draw attention to the dangers of PFA.

And now it all looks like ending in a farce. After spending millions on studies there is a lack of money for performing any stabilisation works.

Editor

Some Ventnor Tunnels. Isle of Wight.

Once an interest in the underground has been kindled, one is always on the lookout for new opportunities for underground exploration. This interest, coupled with a long standing affinity with the Isle of Wight, resulted in a rumour reaching my ears about a little known tunnel, apparently at Ventnor.

The story was that a tunnel existed for transporting invalids to the beach. Little else was known other than that Ventnor had enjoyed a reputation in the latter part of the 19th century and early 20th century, not only as a minor spa, but also as an excellent place for convalescence. The climate was particularly favourable, enjoying above average temperatures in a southerly aspect, sheltered position.

Later a little more information came to light with the report of a sighting of the tunnel end, by a visitor to the Island, shown by a local with good local knowledge. The location was in the undercliff, west of Ventnor and as things were now looking serious, a visit was planned.

The location of the tunnel is in what is now the Ventnor Botanic Gardens. These occupy an area of the undercliff to the west of Ventnor Park and to the south of the now defunct Ventnor West to Merstone Railway. Ward Lock's Guide 1926/7 series identifies this area as the Royal National Hospital and Grounds. Exploration of the Botanic Gardens reveals a narrow cutting into a modest hill ending in a door which clearly leads to an underground system of some sort. The cutting, which is stone-lined, about six feet wide, some thirty feet long and at it deepest about fifteen feet deep, runs north-south with the tunnel heading south towards the shore. The 19th Century was a period of extensive development for the Isle of Wight and

it is from this era that the tunnel dates.

The Royal National Hospital was a substantial establishment opened in 1869 as the National Cottage Hospital for Consumption and Diseases of the Chest. Queen Victoria first holidayed at Osborne in 1844 and by the 1850s, the then new Osborne House as we know it today was built on the Island at Cowes. During the Victorian era the Island enjoyed new prosperity. This was reinforced by the development of the railway network from 1862. The National Hospital became part of that prosperity.

The tunnel, is one of the few remaining features of the Hospital. In 1964, the Hospital was closed and it's principal buildings demolished. The idea of a tunnel to the sea shore was first mooted at a management committee meeting in 1875. Money was not immediately forthcoming, but the idea of a tunnel for patients, to enable them to aid recovery by frequenting the beach, was a popular one. Subsequently the tunnel was built, but the grand notions of aiding recovery were lost in the alternative uses to which it was put.

It appears that the tunnel was built eventually in the 1880s as part of a new sewerage and drainage scheme. The use to which the tunnel was put was to propel through it, rubbish, which was disposed of in the sea. The tunnel was closed by order in 1940 as part of the wartime measures.

Both ends of the tunnel are still accessible with difficulty and an exploratory visit is being sought. The possibility of developing the tunnel as a visitor attraction is a matter that the management of the Botanic Gardens must have considered.

Research indicates that as well as basements and a subway filled in with the rubble from the original Hospital buildings, a further tunnel existed. This was from the Nurses Home, now an old peoples guest house, to the northern Hospital drive. It was approached by a long staircase and led under the road to the western end of the Hospital buildings. Nothing is known as to whether this tunnel still exists.

The Hospital was served by the Ventnor West- Merstone Railway. The stations of St Lawrence and Ventnor West being in the immediate vicinity along the undercliff. The line heads inland after St Lawrence and to facilitate this, the half mile long, St Lawrence tunnel was constructed. The two stations were not opened until 1897 and 1900 respectively and the line was closed in 1952. Today the tunnel is in use as a mushroom farm.

More tunnels are to be found in the Ventnor Station railway and goods yard of the Ventnor to Ryde Railway. These appear to be the remains of a chalk mine and have been used for storage of Railway goods in the past. The station area was constructed in an old chalk quarry cut beneath St Boniface Down. The railway passes through the 1,312 yard long Ventnor tunnel immediately after leaving the station and was first opened in 1866. Ventnor station and its railway tunnel to Wroxall were closed in 1966. Since then the station site has been developed as an industrial estate. The old chalk tunnels can still be seen but access is difficult as they are in use by the various industrial concerns on the estate. The railway tunnel is sealed and used by Southern Water as a spring water source.

The author would be interested in making contact with any Sub. Brit. members who are familiar with these or any other tunnels on Wight.

Sources:

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Bruce E Osborne.

Maastricht Conference 1995

It is not often that delegates sleep in a Nato barracks in one country, then catch a coach to another country for breakfast. But, that is exactly what happened to those of us who attended the International Symposium on Souterrains organised by SOK (Studiegroep Onderaardse Kalksteengroeves) held in Maastricht (Netherlands) and Riemst area (Belgium) at the beginning of August. This was indeed the second Symposium to be held in the Limburg area. A successful Study Week in 1984, was the preliminary introduction for several interested persons from both France and Britain to the delights of the local quarries. Building on from this triumph the First International Symposium for the study of Underground Quarries was held two years later in 1986: both these two previous splendid occasions, held in the centre of Maastricht, were then ably organised by Eef and Margriet Smitshuysen and colleagues. Twelve British delegates were present on this year's symposium, and four gave papers, which are summarised below. In due course proceedings will be published of the event.

Sylvia Beamon 's paper was entitled; medically speaking, how safe are you underground? which drew attention to some lesser ailments, both past and present. Nineteenth century methods of work, whilst increasing productivity, caused the miners working conditions to deteriorate: daily climbing up and down ladders, dusty and contaminated environments contributed to many tunnellers contracting heart and lung problems. TB became prevalent and a lot of workers were weakened by infestations of hook worm.

On the other hand, modern underground healthy living in China, and health centres in Eastern European salt mines were fully discussed with emphasis on eastern European asthma treatment in Romania. Patients stay in the depths of salt mines for up to four hours at a time for a fortnight or so, when a high cure rate is expected. It was reported that the Poles are shortly to open another of their salt mines near Kracow for the same purpose. The problem of pollution of the soil and in turn groundwater, a hazard to subterranists, was mentioned, together with the up-to-date disorders of bone necrosis, and those with ear problems who should take care if they intend to use the Channel Tunnel.

Jim Bradshaw lectured on Deneholes and Chalkwells in

Britain which was a most erudite explanation on these medieval and later structures dug for chalk for marling, farming practice to manure acidic fields, or to break up clayey soils. One such structure has been scheduled.

Ivor Brown's paper was entitled The underground limestone mines at Ironbridge, Shropshire, U.K. Ironbridge is now a World Heritage Site on account if its early association with iron production and the Industrial Revolution. The town sprung up on the River Severn which passes through a Gorge partially in Silurian Limestone. This limestone has been worked for at least 300 years for limeburning and for use as a flux in the ironmaking process. This limestone being pure enough for fluxing was only found in 'pockets' and because of the topography much of the stone has been produced by underground mining methods.

Well before 1800, the great underground caverns formed by mining attracted visitors, many of whom were well educated and influential people, and left written accounts of their subterranean experiences. By 1910, however, all mining was abandoned except for the robbing of the support pillars which continued for a few more years. Since 1900, there have been many ground collapses in the area, some seriously affecting road and property.

In the early 1970s the speaker, and members of the Shropshire Caving and Mining Club, gained access to the old workings by means of a 30m deep shaft and produced a survey. The result of this work was that the local authority, now concerned for public safety on the surface, commenced investigations which led eventually to the complete backfilling of some of the cavities. This contribution told the story of the working of the limestone, the feelings of the many distinguished visitors, and the history of ground stability problems. It also gave an account of the findings of recent exploration, the investigation programme and the measures taken to make the area safe.

Paul Sowan spoke on Tunnelling methods . He explained that the first tunnels were dug to extract flint, metalliferous ores and water. Later tunnels were made in connection with underground stone quarrying, and draining mines. Although the earliest tunnels for the conveyance of persons, tunnels for vehicles or goods through hills are ancient in mainland Europe, they are a relatively recent phenomenon in the British Isles. The surveying and digging of mine drainage tunnels in England ensured that by the 18th century there was no difficulty in constructing similar but larger tunnels for the then expanding canal network.

The prehistory and early history of British railway and road tunnels were described briefly

Pioneering work in tunnelling technology in the British Isles was noted, and road and rail tunnelling methods employed during the 19th century reviewed. The point made was that few details of tunnelling methods survive, and that for illuminating unpublished failures, the geological literature is of no more value than the civil engineering literature, which tended to trumpet only the success stories!

Surprisingly, perhaps, east Surrey (to the south the London) provides a number of more-or-less well-documented examples of early and late rail and road tunnelling methods.

Other examples in SE England, including the various Channel Tunnel attempts, were mentioned. In the 20th century, in contrast, almost any ground can be successfully tunnelled using chemical consolidation, liquid-nitrogen ground freezing, and other techniques.

Trips were arranged into several stone quarries, to the Sint Pietersberg fort, and to the Rijholt flint mine, a similar site to that at Grimes Graves, Norfolk. Amongst the 70 plus delegates, the following countries were represented: France, Austria, Germany, Italy, Czech Republic, Poland, Bosnia, Croatia, Iceland, Argentina, Britain, and of course, the Netherlands and Belgium.

The symposium culminated in a surprise lunch held in a Jesuit underground refectory carved out of the stone. Candlelabras illuminated this area of the quarry as delegates supped soup and drank wine seated on benches alongside an exceptionally long stone carved table.

Thank you all.

Sylvia P. Beamon

Monkton Farleigh Depot. August 1996

This World War II ammunition store. converted from former Bath Stone quarries, has been disused since the 1960's and occupied only by casual scrap metal operators apart from a few years accessible as a museum. The equipment has gradually been removed or wrecked until all the Districts became spoiled and chaotic. They are variously burnt and daubed, polluted with spilled transformer oil, dangerous with dug out floors and torn away pipes or bunking hanging precariously. It is unclear how much asbestos pipe lagging may be lying about as dust after this disturbance and scrapping.

In view of the conditions prevailing undergound it is a great surprise to find that a new and apparently more beneficial occupier is taking positive steps. securing Districts 12 to 18 inclusive with Main West slope shaft for access. Residents on the local Farleigh Rise estate identify the occupier as Wandsdyke Securities. This company already has underground stores in other former Bath Stone quarries which offer secure and air conditioned vault storage for business archive and microfilm records.

The cost of even basic clearing up and installation of effective forced ventilation facilities would be considerable. This may an essential minimum renovation for a responsible employer, not only regarding the hazards mentioned but because radon gas will collect in static or slow moving air underground. It remains to be seen if the same high standards are intended as at the other Wansdyke stores. This will depend on what is being stored.

A new concrete ramp has been built for vehicle access up to one of the lorry loading bays of Main West surface building. A tall security fence is under construction dividing it off from the road which continues to 19 and 20

District buildings. Ramparts of earth and scrap cars heaped up previously to exclude travellers are being removed. None have appeared this summer, possibly as a result of recent national legislation against their lifestyle.

Nothing has been done to clear up the mess of crumpled bunking sections, scattered vehicle parts and other debris left on the surface between 19 and 20. These two Districts presently remain underground as left by the scrap metal operators with their primitive and untidy barrier between the two areas. Damaged fragments of the conveyor systems are left at intervals. except for the type mounted on wooden bases which is completely extinct. Various new breeze block walls now seal 19 and 20 off from Main West haulage, providing for both security and exclusion of foul air.

Wansdyke Securities use narrow gauge railways for slope shaft haulage elsewhere. The shaft they appear not to be using at Monkton Farleigh (Main East) has such a facility so it remains to be seen what method will be applied here

Brian Clarke

Book Review

Engineering Geology of the Channel Tunnel Colin S. Harris, Malcolm B. Hart, Paul M. Varley, and Colin D.Warren, (edrs), Thomas Telford Publishing, 1996. xi + 526 pp. ISBN 0 7277 2045 7.

This book, as stated in Sir A. Muir Wood's introduction, is 'unashamedly a book by tunnellers for tunnellers.' At 80 it is unlikely to appeal to many people other than those practically concerned with the construction of further large-scale tunnelling works. Nevertheless, the volume does contain some material of historical interest, and provides a fascinating insight into the thoroughness with which the recently successful project was researched and planned. Although there are dense patches of text and tables replete with geotechnical data and mathematical calculations, much of the narrative is well-written and easy to follow.

Paul Varley and others provide an excellent historical overview of geological investigations which arguably date back to one Verstegan who in 1628 drew attention to the similarity of the geology of the opposing coasts of England and France at the Straits of Dover, and the likelihood that the two countries had once been joined by dry land. Actual civil engineering works, rather than geological observations at surface, took the form of site-investigation boreholes at Fan Hole, between St. Margaret'a Bay and Dover, and at Ferme Mouron near Sangatt. in and from 1865. Boreholes of over 550 feet were made at both places. The Channel Tunnel Co. (Limited) Act, 1875, authorised the company to purchase land at St. Margaret's Bay, but sufficient funds for development failed to materialise and the focus of activity and interest then shifted to the Abbotscliff and Shakespeare Cliff sites the other side of Dover. Many of the more popular accounts of the history of the Channel Tunnel have been supported by contemporary illustrations of the three sites but have regrettably hopelessly confused them. It is thanks to Paul Varley, principally, in his several published works on the history of the tunnel that this confusion is rectified. Regrettably, howover, no details are in this provided in this volume concerning 1870s - 1880s tunnelling trials known to have taken place in the Chalk of the Medway valley; or of tunnelling machine trials undertaken in and after the first World War at the War Office Testing Ground at Claygate, Surrey (presumably in the London Clay.)

The bulk of the work, of course, concerns the post Second World War and modern site investigations, desk studies, and actual excavation works. There is much information on the geology of the Chalk and short accounts of tunnelling for other purposes in the east Kent Chalk, including the South Eastern Railway's tunnels on the line from Folkestone to Dover, the Terlingham water supply tunnel of Folkestone waterworks, etc The earthquake history of those parts of England, Belgium, and France immediately adjoining the Straits is presented in some detail. The geomorphology of the Chalk sea-cliffs and the inland Chalk escarpment is treated in considerable detail, as even is the environmental impact on the marine and inland floras and faunas.

This is an important volume, and contains much east Kent data of more than specialised tunnelling interest. It contains 11 pages of English and French references to published work that provide an invaluable guide to both the older and the modern literature.

Paul W. Sowan

Jersey and Sark. Trip Report 1994,

In August 1994, I went to Jersey for a short family trip. I did not expect to visit any underground sites. But the island offers quite a few interesting caves and underground structures.

The northern coast of the island, the largest of the Channel Islands, has many sea caves. I have visited a few of them in the granite cliffs of Plemont Bay, at the north west of the island, near the ruins of Gros Nez Castle. Several short marine caves are accessible at low tide on the east side of the bay. The Greve de Lecq caves are deeper. One of them is adorned with the beautiful waterfall of a small stream. On the western side of Bonne Nuit Bay, at the base of a deep inlet, the Wolf's Caves can be reached at low tide by a long impressive path with stairs, winding its way down a steep gorge. The strength and the noise of the waves, the environment of vertical rocks polished by waters give a wild character to these famous and deep caves.

Jersey is also rich with artificial caves. The Channel Isla nds were the only parts of British territory occupied by German forces during World War II. The Germans built many underground structures along the coast of Jersey, casemates, bunkers, shelters, ammunition and gas depots, observation sites and command posts. These fortifications, certainly the most sturdy of the whole Atlantic Wall, were avoided by the Allies in June 1944 during the landing operations in Normandy and the 28,000 German soldiers, starving, discouraged and idle were kept waiting and never had the opportunity to shoot a single bullet. After the 1945 surrender they were sent to

England as prisoners of war.

Several of their underground structures can be visited today. A few of them are open to the public, one of them near Gros Nez castle. The most important one is the German Underground Hospital, now one of the island's major tourist attractions. It was built on the orders of the Germans, in the centre of the island, in the north of Saint Aubin Bay. Many prisoners of war of different nations, especially Ukranians, died in harness, digging up these long tunnels in hard rock. There the visitor can see a fully equipped military hospital of the 1940s, with operating room, lodgings for doctors and nurses, and several uncompleted galleries.

In the interior, at about two miles from Gorey, a small harbour on the east coast, the site of la Hougue Bie offers an amazing summary of the history of the island. It is made of a knoll (hougue in the Jersey dialect means mound) built during the Neolithic times, some 6,000 years ago. The 1924 excavations have brought to light an underground dolmen made of an access corridor and a chamber with two smaller chambers on both sides. This covered alley is made of granite rocks eroded by waters. The biggest boulders weigh up to 20 tons. They were hauled from the Queen's Valley, about a mile away, which implied the use of a great number of men and thus, a strong social organisation. This work reminds us of the statues of Easter Island. At the top of the knoll a chapel was built in the XIIth century, then enlarged around 1520. At a few metres from the mound, the Germans - again - have built a communication bunker turned now into a museum. They have also built an underground shelter inside the artificial hill itself, on the other side of Neolithic tomb and, fortunately, without any communication with it.

On the south coast of the island, lies the cave known as Cotte de Saint Brelade. Stone tools were discovered in 1881. Systematic archaeological excavations were made since 1905 by the Societe Jersiaise which became owner of the place 50 years later. The studies made by archaelogists from Cambridge in 1986 published an important monograph on the cave.

La Cotte de Saint Brelade was used by Paleolithic man from 250,000 to 110,000 years ago, i.e. during 1,400 centuries, when the English Channel was most of the time a grassy plain where lived mammoths and woolly rhinoceros.

The cave is now closed and cannot be visited.

La Cotte de Saint Brelade and La Hougue Bie are the subjects of a set of four fine Jersey Europa stamps issued in 1994.

The island of Sark is located at some ten miles at the north-west of Jersey. This little granite plateau has a surface area of a little more than 2 square miles, but it totalled 33 miles of coast, all of it being rock cliffs sometime reaching 300 feet in height. A great number of marine caves open at the base of the cliffs.

I have only spent a few hours on the island of Sark and had no time for a real investigation Though, I have been able to visit a few small sea caves near Creux Harbour, considered to be the smallest harbour in the world! I had a look at the of Victor Hugo Cave, a large marine Cave on the east coast.

In the peninsula of Little Sark, the southern part of the island, beyond the breathtakingly high isthmus of La Coupee, silver mines were opened in 1836 and closed in 1840, for the veins were going under the level of the sea. There I have just been able to see a few underground shelters used by sheep. There is certainly more to be seen, especially from the mine shafts still visible on the high coast.

Jacques Chabert

Cornwall. Mining Books

From, J A Buckley 25 Brea Lane, Pool, REDRUTH
Cornwall TR15 3DS
July 8th 1996

As you may remember, last year we brought out the book of underground mining photographs entitled, South Crofty Underground This book. with excellent photographs by Paul Deakin, was a great success, and we are now working on the next two books in the series: Geevor Mine Underground and Wheal Jane Underground. The Geevor book has pictures by David Wills, formerly the official mine photographer and Paul Deakin, with one or two others The Jane book will contain mostly Paul's pictures. Once again the same high standard of photographs is aimed for, and the same proportion of coloured photographs used. The Geevor book should be out at the beginning of August and the Jane book by late autumn of this year These two books will again retail at £3.50, with discounts for orders in excess of 5 being 25% Postage to your members for up to three copies is free. We hope that your members will take advantage of this offer. We feel confident that they will enjoy these books as so many have written to ask when they are to be published. Please send cheques made payable to J A Buckley at the above address.

Grimes Graves and ritual

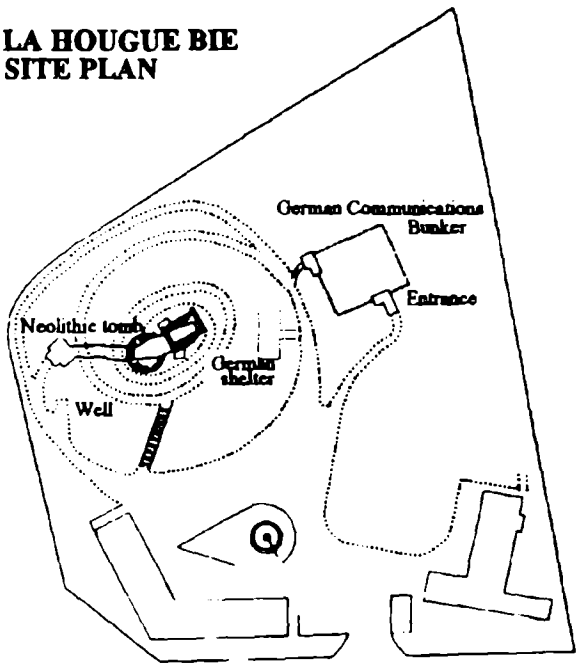
Suggestions that underground places were used for ritualistic or mystical purposes are usually greeted with scepticism by the cognosenti in Sub. Brit. An article, *Grimes Graves mined 'for ritual reasons'*, *British Archaeology, 18, 1996* probably doesn't denote a reversal of trend but it might do!

Grimes Graves are in Suffolk and to now have been regarded as Neolithic 'axe factories' - a series of 400 shafts sunk to mine flint in the chalk. A survey by the English Royal Commission of around 50 Neolithic flint-mining sites in England, including Grimes Graves says evidence of 'unusual non-functional activity' can be found at every one of the mines surveyed.

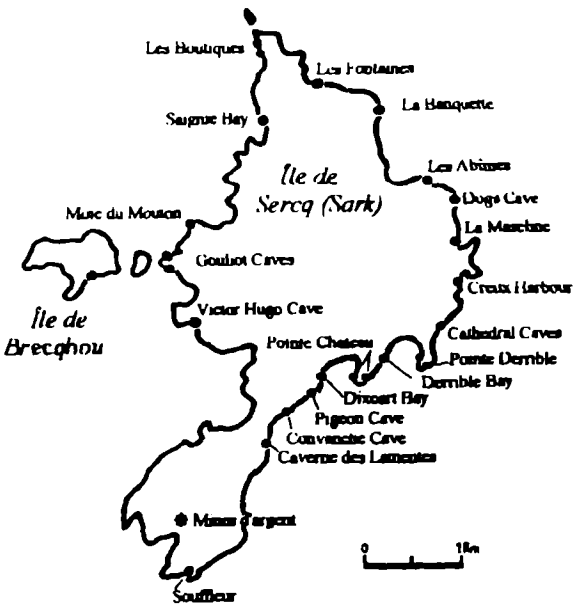
Examples are complete animal burials, arrangement of animal bones picks and tools, chalk 'lamps' possibly used as libation bowls and graffitti.

The lesson is, don't explore underground places with fixed ideas. Artifacts should be recorded in situe. Have mining tools been jettisoned or have they been carefully placed where they are for some special purpose?

It can be argued that flint mines are a special case since



Plan by Jersey Museums Service
German shelter added from memory (J.C.)



there is no need to mine flint - it can be picked on the surface. Nevertheless one needs to question whether, for example, dene holes could have been used for ritualistic purposes. Although chalk would have been generally unavailable to early agriculturalists without sinking shafts, it is possible that dene holes produced were later used for ritualistic purposes. Maybe religion and ritual was once an integral part of mining practice?

Malcolm Tadd

Letter To editor by E-mail

I must admit to being curious about your Society. As a boy, growing up on Merseyside in the 50s and 60s, my friends and I used to play in and around former air raid shelters. One particular favourite was a set of underground tunnels driven into a sandstone ridge at Bidston Hill, Birkenhead which were accessed either down a ventilation shaft on the ridgeline (about 100' from memory) or from an entrance at the base of the ridge (when the Police weren't around). Inside was a series of tunnels intersecting at right angles which were lined with seats. I think that, after the war, the facility was used as some form of store. I noted on my last visit to the area in 1994 that the ground level outside the exits had been raised to block them off - presumably to stop urchins such as myself from gaining access. I suppose my interest in these sorts of underground sites developed from that point but it's not really the sort of topic that one can easily research - certainly not before the advent of the Internet Since adolesence, I have noted the existence of RSGs and seen the odd bit of literature. I recall a TV program years ago on the subject of RSGs which included interior shots of one of these facilities - I recall seeing the pre-recorded tape message to be played over the BBC warning of imminent attack. I also recall visiting the facility at Hack Green, Cheshire, in the mid 1960s but it was an Air Traffic Control Radar Unit operated by the RAF at that time called Mersey Radar. It had the sort of cottage/farmhouse at ground level similar to that in your photos. My interest had been dormant for years (many people just don't understand why one should show an interest in such matters, especially here in Australia - ask my wife!). However, it flared up again a couple of weeks ago when I came across a reference to nuclear bunkers on the Internet, specifically the facility at Goathland, while chasing info on where the TV series 'Heartbeat' is set (my wife and I are visiting the UK at Christmas and must have a beer in the Aidensfield Arms). Well, one search led to another until I found your home page. It seems that much of the secrecy surrounding RSGs and the plans for the governing of a post nuclear attack UK has recently disappeared, to the point where the bunkers, or at least some of them, have either been sold or are on the market. The Goathland facility is apparently for sale so while we're in "Aidensfield" we'll go and have a look. I guess I'm curious to see how taxpayers money was spent in the 1960s to allow politicans and officials to run the country after nuclear attack. I've noted the books you mention on the review page and will see if I can purchase same. Advice of any other books or videos that are available would be most welcome. I would appreciate any additional information on your society - do you have an overseas membership category? I found your web site very intersting and have bookmarked for future reference. I look forward to hearing from you.

Kind regards

Don Malcolmson, Canberra, Australia

Siren

New members and those who have indicated that they wish to receive copies of 'Siren' will receive the latest copy with this newsletter. You are invited to rectify your omission if you have forgotten to inform Barbara Tadd that you want to receive this Cold War newsletter

BIAS Brunel Prize Notice

With regard to BIAS Brunel Prize which was advertised in the Newsletter 16, Owen Ward writes, 'For the purposes of BIAS, the Bristol region includes the area briefly known as the County of Avon - so it definitely includes the stone mines in Bath, and even extends its interest to other 'Bath Stone' mines in Box and Corsham - and elsewhere.

Please note corrected address. Owen Ward, 77 Hansford Square, Combe Down , Bath, BA2 5LJ, tel, 01225 832329

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Chapter

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2 Tunbridge Wells
3 Epsom
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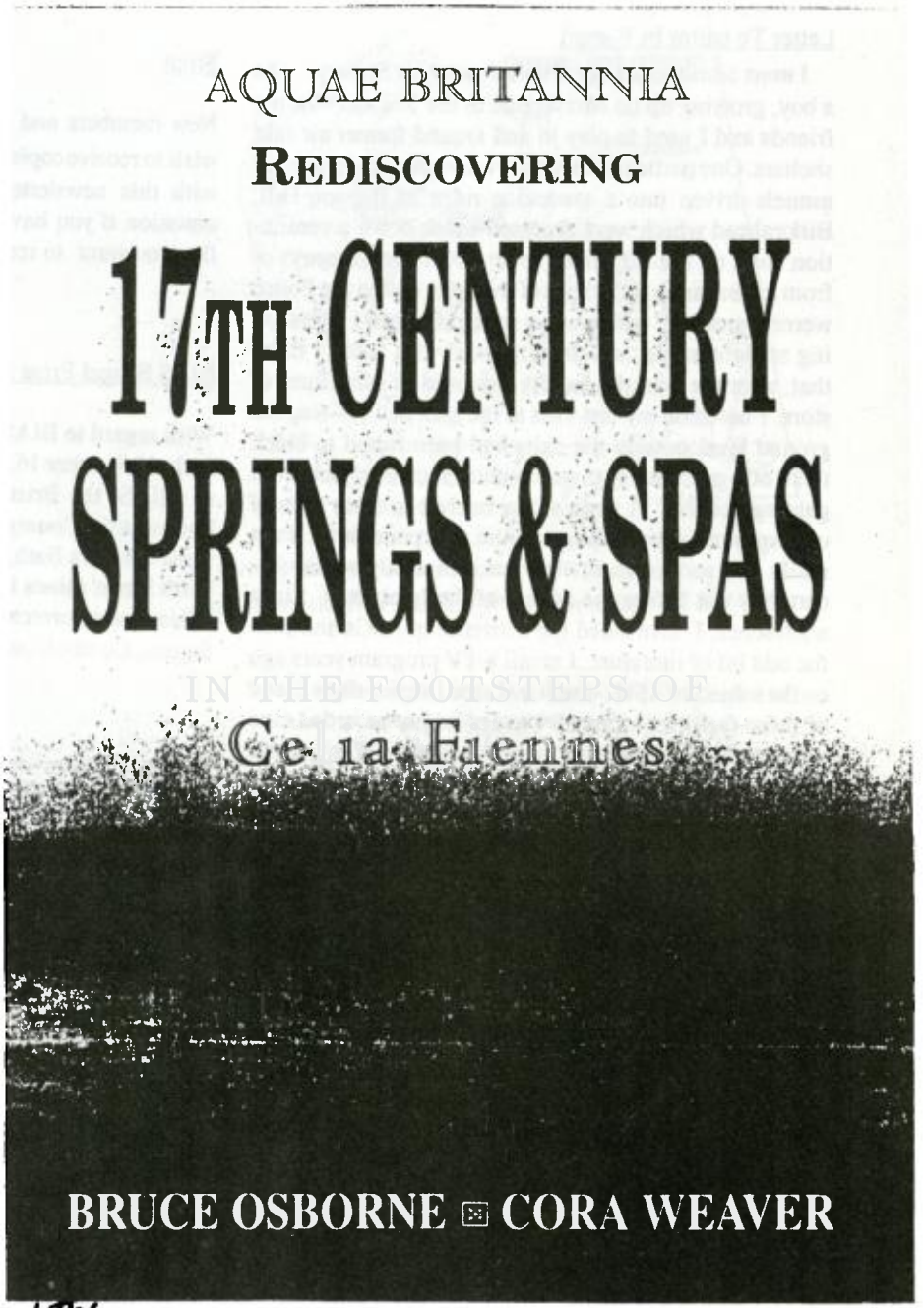
5 Barnet
6 Astrop & Great Horwood
7 Buxton
8 Tideswell
9 Scarborough
10 Durham
11 Knaresborough
12 Copgrove
13 Harrogate
14 Wigan
15 Holywell
16 Nantwich and Northwich. *
17 Droitwich
18 Richards Castle
19 Malvern
20 Bristol
21 Bath
22 Wells
23 Alford (Somerset)



* Malcolm
interesting material
on salt mines. How
about featuring
them in
SB. newsletter
Bruce

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aux diverses Rencontres organisées entretemps sur les carrières souterraines, sur les souterrains-refuges, sur le patrimoine souterrain et les problèmes existants, l'Association wallonne de Recherche et d'Etude des Souterrains et la SO.BE.R.E.S. organisent le

2ème Congrès International de Subterranologie
Archéologie et Histoire en milieu souterrain

dans les bâtiments des Facultés universitaires catholiques de Mons (FUCaM), chaussée de Binche 151, 7000 Mons (Belgique).

Sujets traités

Les communications et présentations porteront sur TOUS LES ASPECTS de la recherche ayant pour objet LES CAVITES HISTORIQUES CREUSEES ET AMENAGEES PAR L'HOMME :

- souterrains-refuges, villes souterraines
- grottes et cavernes aménagées
- souterrains et caches en milieu rural/urbain
- souterrains d'abbayes, cryptes, caves
- souterrains et puis de châteaux, citernes
- anciennes carrières souterraines, marnières
- anciennes mines souterraines, (sauf charbon)
- glacières en milieu rural/urbain
- structures souterraines militaires
- aqueducs et autres tunnels, canaux d'irrigation

Les excursions et visites sont prévues dans l'après-midi : Carrières souterraines de phosphates de la Malogne (Cuesmes); minières néolithiques (Spiennes), souterrains militaires (Philippeville); abbaye de St Denis en Brocqueroie (Obourg); château des ducs d'Havré (Havré); glacières, etc...

Les communications sont limitées à 15 minutes et les standards prévus sont : diapositives 24 x 36, retro-projecteur, ...

Elles feront l'objet d'un recueil (Actes) dont le prix sera inclus dans le montant de l'inscription. Les personnes désireuses de présenter une communication sont priées de nous le faire savoir au moyen du Bulletin de pré-inscription ci-joint.

Hébergement

lle de Mons dispose de nombreux hôtels confortables utes catégories. Le camping et le caravanning sont bles. La liste vous sera adressée après inscription.

Il est prévu un repas froid le midi dans le bâtiment des Facultés. Le dîner du soir et le lieu sont laissés au choix du participant (liste des restaurants sera également adressée ultérieurement).

Inscriptions

Afin de faciliter l'organisation du Congrès, veuillez compléter le Bulletin de pré-inscription et nous le renvoyer au plus tôt AVANT LE 1er OCTOBRE 1996. Les personnes ayant renvoyé ce Bulletin recevront la 2ème circulaire.

TOUT COURRIER DOIT ETRE ADRESSE A :
2ème Congrès International de Subterranologie
Maison des Arts
Chaussée de Haecht 147
B- 1030 Bruxelles
Belgique

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Ten years after the first Congress at Reves, Belgium, and following various other organized meetings on quarries, refuges and similar ancient sites with their existing problems, the Association Wallonne de Recherche et d'Etude des Souterrains and the society SO.BE.R.E.S. now propose

The Second International Congress on the Subterranology
Archeology and History of various souterrains

to be held in the building of the Facultés universitaires catholiques de Mons (FUCaM), chaussée de Binche 151, 7000 Mons (Belgium).

Subjects to be covered

The communications (papers) and presentations will touch every aspect of research, focussing on HISTORIC CAVITIES CUT AND ORGANISED BY MAN :

- refuges, town shelters
- man-made grottos and caverns
- various underground storage spaces both rural and urban

crypts, cellars, ossuaries
- water cisterns, drainage systems, and wells on estates
- ancient quarries, marl pits and chalk wells
- ancient mines excluding coal
- rural and urban ice-houses
- military underground structures
- aqueducts, other tunnels, irrigation canals (channels conduits, culverts)

The excursions and visits are scheduled in the afternoon Phosphate mine at Malogne (Cuesmes); Neolithic mining (Spiennes), military site (Philippeville); abbey of St Denis in Brocqueroie (Obourg); château (Havré); ice-houses etc...

The communications are limited to 15 minutes and the standard equipment will be available for slides 24 x 36, and overhead-projector, ...

It is expected that these papers will be compiled and produced in a Proceedings (Actes) after the Congress, for which the cost will be included in the registration fee.

Persons wishing to present a paper should indicate such on the attached pre-booking form.

Accommodation

The town of Mons has a number of comfortable hotels of all categories. Camping and caravanning are possible. A list will be sent to you upon paying the registration fee.

Meals

A cold lunch is proposed at noon in the faculty building. Dinner in the evening will be at the choice of the participant (a list of restaurants will be sent out later)

Registration booking fee

In order to attend the organisation of the Congress, please complete the provisional booking form and send it as soon as possible, PRIOR to the 1st OCTOBER 1996. Those who have returned the booking form will then receive a second circular.

ALL MAIL SHOULD BE ADDRESSED TO :
2nd International Congress on the Subterranology
Maison des Arts
Chaussée de Haecht 147
B- 1030 Brussels
Belgium